

---

## CHAPTER 12: Personal Protective Equipment

### 12.1 Employer/Employee Responsibility

**W**hen you are unable to eliminate a work place hazard through safeguarding or engineering changes, MIOSHA requires that you provide personal protective equipment (PPE) to employees who have the potential of being exposed to hazards. Equipment must be provided at no expense to employees when specified by a MIOSHA standard. Employers must also replace equipment when needed due to wear and tear or when the equipment is lost due to the work environment.

Rules specifying when and the types of personal protective equipment needed are included by both MIOSHA health and safety rules. ***MIOSHA General Industry Safety Standards – Part 33, Personal Protective Equipment*** and ***MIOSHA General Industry Health Rules R 325.60001-60008*** may be ordered from the Michigan Department of Consumer and Industry Services (CIS), Bureau of Safety and Regulations, Standards Division. PPE is also discussed in Chapter 14.

### 12.2 Hazard Assessment

As an employer, you must assess your work place to determine if there are hazards present that make the use of PPE necessary. If hazards are present or likely to be present, then the employer must do ALL of the following:

- Select and have employees use the types of PPE required to protect them from the hazards identified;
- Inform each affected employee about the decisions regarding selection of PPE; and
- Select the PPE that properly fits each employee.

You must certify in writing that the hazard assessment was completed by creating a written document to serve as certification of the hazard assessment and provide the following information:

#### In This Chapter . . .

- 12.1 Employer/Employee Responsibility
- 12.2 Hazard Assessment
- 12.3 Training
- 12.4 Retraining
- 12.5 Face and Eye Protection
- 12.6 Foot Protection
- 12.7 Hand Protection
- 12.8 Respirators

- The work place evaluated (i.e., name and address of your business);
- The person certifying that the evaluation has been performed; and
- The date of the hazard assessment.

### 12.3 Training

It is not enough to just provide your employees with PPE. You must also train all employees who use PPE in the following:

- When and why PPE is necessary.
- The type of PPE necessary to fit the job duty.
- How to correctly put on, take off, adjust, and wear needed PPE.
- The limitations of the equipment.
- The useful life of the equipment, as well as the proper care, maintenance, and disposal of the equipment.

Before allowing employees to use PPE, be sure they can show you they understand how to put on and use the equipment and that they understand all of the above.

### 12.4 Retraining

Retrain your employees any time you believe an employee is not knowledgeable or does not have the skill or understanding needed to use the PPE. Also, retrain if any of the following occurs:

- Changes in the work place that make previous training outdated;
- Changes in the types of PPE used, thereby making previous training outdated;
- When it appears an affected employee's knowledge or use of assigned PPE indicates the employee has not retained the understanding or skills necessary.

Maintain written certification of employee training including the:

- Name of each employee trained;
- Date(s) of training; and
- Subjects covered by the training.

### 12.5 Face and Eye Protection

Printing employees may require face and eye protection based on the duties assigned to them, such as the hazard of splashing inks or other chemicals. Common tasks requiring face and eye protection in the printing industry include the need for eye protection when changing corrosive developer or fixer solutions. Eye protection is also needed during parts cleaning operations when the potential exists for solvents to splash.

Generally, face and eye protection must be provided to employees if hazards exist due to the following exposures:

- Flying objects or particles;

- Molten metal;
- Liquid chemicals;
- Acids or caustic liquids;
- Chemical gasses or vapors;
- Glare;
- Injurious radiation;
- Electrical flash; or
- Any combination of the above hazards.

### ***12.5.1 Face and Eye Protector Selection***

***MIOSHA General Industry Safety Standards – Part 33, Personal Protective Equipment***, contains a “Face and Eye Protector Selection Chart,” to use as a guide in selecting the appropriate protective equipment.

When selecting eye protection, consider the following requirements:

- If there is a hazard from flying objects, side shields are required.
- Hardened or plastic contact lenses meeting the Federal Food and Drug Administration standard are not considered eye protection in occupational settings. They are manufactured to lesser strength and other specifications than those manufactured to American National Standards Institute (ANSI) standard specifications.

Face or eye protection must also meet the following minimum requirements.

- Provide protection against the particular hazards for which it is designed;
- Fit snugly and not unduly interfere with the employee’s movements;
- Capable of withstanding sanitizing; and
- Marked distinctly to identify the manufacturer.

### ***12.5.2 Maintenance of Face and Eye Protectors***

All face and eye protectors must be kept clean and in good repair.

Cleaning facilities for the protectors must be kept away from the hazard but be readily accessible to the wearer.

Replace headbands of goggles and shields when they become slack, worn out, sweat-soaked, knotted, or twisted.

A face or eye protector is for individual use only. If it is necessary to reissue a face or eye protector, it must be thoroughly cleaned, sanitized, and in good condition.

## 12.6 Foot Protection

If there is a potential for foot injuries due to falling or rolling objects or a danger of objects piercing the sole of the shoe, employees must wear protective footwear.

If you have a process that could create a hazard due to absorption or physical contact by the feet, then footwear such as boots, overshoes, rubbers, wooden-soled shoes, or their equivalent must be used.

## 12.7 Hand Protection

In general, provide employees with hand protection if they are exposed to any of the following hazards:

- Skin absorption of harmful substance;
- Severe cuts or lacerations;
- Severe abrasions;
- Punctures;
- Chemical burns;
- Thermal burns; or
- Harmful temperature extremes.

When you select hand protection for use in your printing establishment, consider the following:

- The task to be performed;
- Conditions present;
- Duration of use;
- The hazards and potential hazards identified. Frequent skin contact with solvents is the most likely cause of dermatitis in the manufacturing industry;
- The interior of the hand protection must be kept free of corrosive or irritating substances; and
- Hand protection must be sanitized before being reissued.

Examples of the types of hazards that require hand protection by employees of printing establishments include the need for gloves during part cleaning operations by maintenance personnel. Always consult your material safety data sheets (MSDS) to see if the products you are using require glove usage.

**CAUTION!** Supervise and train all employees to NEVER wear gloves if they have any possibility of coming into contact with inrunning pinch points, rotating parts, or are working around automated equipment. Train them on the safe work practices to:

- Wear short-sleeve shirts or roll up long sleeves;
- Remove jewelry before beginning work;
- Never override an engineering control or operate a machine with a guard removed.

## 12.8 Respirators

The ***MIOSHA General Industry Occupational Health Rule 3502 – General Respiratory Protection*** applies to all employers whose employees are required to wear respirators for protection against overexposure to air contaminants or in emergency situations. The rule requires the employer to:

- Develop a written program discussing selection and use of respirators. The program should include a hazard assessment and it should identify the program administrator's responsibilities.
- Train employees in the proper use and limitations of respirators. Often employees use inappropriate protection because they have not been informed of the limitations of the equipment. For example, if disposable dust masks are made available to employees, it must be stressed that these respirators are useless for any of the various solvents found throughout the facility.
- Ensure that all respirators used in the work place, whether supplied by the employer or the employee (for personal use), are approved or accepted by the National Institute for Occupational Safety and Health.
- Provide annual fit testing, not to be confused with a "fit check," to all employees who are required to wear negative or positive pressure respirators.

Medical surveillance of employees required to wear respiratory protection is strongly recommended to ensure they are physically and psychologically capable of wearing the device.

**The federal Occupational Safety and Health Administration has proposed revisions to the respiratory protection standard that would mandate medical surveillance for certain respirator users. You should keep abreast of this issue in the future.**

Special provisions apply if you have air-supplied respirators (air line or self-contained breathing apparatus) to ensure function of the equipment and quality of the air supplied. This regulation also addresses the use of respirators for emergencies.

Additionally, all employees who wear respirators that have a tight fitting face piece, meaning the respirator contacts the surface of the skin, must not let anything (i.e., facial hair such as beards and long goatees, sideburns and mustaches, skullcaps and temple pieces on eyeglasses) interfere with the sealing surface of the respirator!

You are strongly encouraged to include and enforce a policy which addresses this issue in your respirator program when these types of respirators are used in the work place.

Copies of materials that help employers develop written respirator programs and train employees may be obtained from the CIS, Consultation Education and Training (CET) Division. Video tapes in VHS format (for generic training of employees in the use and limitations of respirators) can be borrowed from CET.